

ABSTRACT

This invention discloses an optical device that includes a wavelength-selective optical transmission system. The wavelength-selective optical transmission system further includes a first waveguide for transmitting a multiplexed optical signal therethrough. The wavelength-selective optical transmission system further includes a second waveguide coupled to the first waveguide wherein a least one of the first and second waveguides having a set of wavelength-selective Bragg gratings disposed near a coupling section between the first and second waveguides. One of the first and second waveguides has an aspect ratio, i.e., a ratio of a thickness divided by a width, is no greater than 0.75.